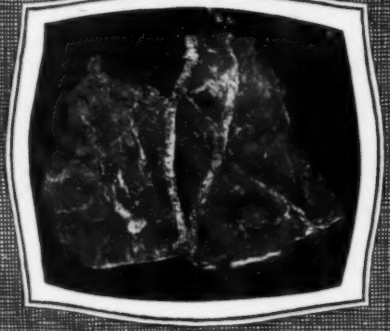
ASBESTOS

The Most Important Mineral in the World

Vol. 8 AUGUST 1926 No. 2



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... ASBESTOS ...

A MONTHLY MARKET JOURNAL

DEVOTED TO THE INTERESTS OF THE ASBESTOS AND MAGNESIA INDUSTRIES

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Theory and Function of the Automobile Brake

EDITOR'S NOTE: This will begin a series of six articles on the above subject, written by Edward J. Pope of Ferodo & Asbestos, Inc., New Brunswick, N. J. The subjects are "What Are Brakes?", "Friction and the Co-efficient of Friction," "Brake Design," "The External Contracting Band Brake," "The Solid Shoe Wheel Brake," "The Propeller Shaft Brake"

While Mr. Pope has published these articles in book form, the book has not yet been distributed generally, and "ASBESTOS" has, thru the courtesy of Mr. Pope, acquired the exclusive right to reprint the chapters of the book in the form of a series of articles. We feel sure these articles will prove very instructive and interesting to all our readers, and particularly to those interested in the manufacture or sale of asbestos brake lining.

I. WHAT ARE BRAKES?

What actually causes a car to stop when the brakes are applied?

Before reading further, stop and think for a moment; if asked this question how would you answer it? Therefore, you may now appreciate how essential it is for any one interested in brakes or brake linings, to study the importance of brakes, the functioning of brakes, and brake lining application, so as to be able to give an intelligent answer to questions that may be asked, as well as to use such knowledge in a practical way.

There is nothing that can take place within the automobile itself that can directly influence the motion as a unit, for its motion can be changed only by some force *external* to the car itself.

Three such forces are normally present, namely—wind resistance, gravity, and the contact of the road to the wheels.

The first one is of no real importance. Grades have to a certain extent effect on the stopping distance, but the force that actually stops the car is the last named; the

force that is applied from a point external to and in a direction opposite to that of the motion of the automobile.

The frictional force brought into operation by the resistance that the brake bands offer to the continued rotation of the wheels, the maximum possible road contact occurring when it is equal to the co-efficient of contact, multiplied by the weight carried by the wheels. If the brake band or shoe pressure is greater than the maximum possible contact, the wheels will lock and a transfer of energy will take place between the sliding wheels and the surface of the road. The shortest possible stopping distance is obtained when all brakes are adjusted so that wheels are held just short of the point of locking when coming to a dead stop. This condition can only be accomplished by properly adjusted brakes, and a brake lining that is uniform in construction.

The second article of the series "Friction and the Co-efficient of Friction" will appear in the September number.

Some of our readers, particularly those engaged in the manufacture or sale of asbestos brake lining, may be interested in the book, "Grosstadt-Garagen" (Garages of Large Cities) recently published by Dr. Ing. George Muller, of Deutsche Bauzeitung Ltd., Berlin, S. W. 48, Germany.

Dr. Muller's book gives plans for the building and managing of garages, showing the most economical methods in both fields. The book is, of course, printed in German.

The Asbestos Covering Company

of Washington, D. C.

The life of the insulation contractor is by no means an easy one, even in the best of times.

Generally the contractor acquires his knowledge of the business by association with a manufacturer of insulation, working in the contract department. Then he decides to try it on his own and starts in at the bottom, building up his business slowly, by hard and constant work.

It is therefore a matter of pride with us when we are able to publish the history of a successful insulation contractor. The Asbestos Covering Company is such a one and was first established in 1914, being organized by Frank H. Shipe and Claude Bourbon, co-partners.

Mr. Shipe had been resident manager of the Washington office of the Philip Carey Company for seven years, and naturally received splendid training in insulation contract work during that period.

Mr. Bourbon had been connected with the Maryland Asbestos Company, of Baltimore, Chesapeake Pipe Covering Company of Baltimore, and the Columbia Covering Company of Washington.

So it will be seen that experience in insulation contract work was not lacking, and since the Philip Carey Company decided in 1914 to cease taking contracts for applied insulation work thru their own branches, this offered a splendid opportunity for Mr. Shipe and Mr. Bourbon to start the insulation contract game.

At first only Carey products were handled, but later, when success seemed assured, the firm added to the Carey line, other materials, such as Cork Pipe Covering, Asbestos Protected Metal, Acoustic-Celotex, Linofelt, Quigley Furnace Specialties Company's Hytempite, and Triple-A Solution, and Asbestos Textiles including brake lining, listing, gloves, etc. In fact wherever they found that a material was needed to complete their all round service, that material was at once found and added to their line.

In 1918 Mr. Bourbon moved to California, the part-

nership was dissolved, and the business taken over by Mr. Shipe.

The Asbestos Covering Company has always handled quality merchandise, and best service and workmanship in application work is one of their ideals.

The Company occupies the entire second floor of the building at 916 D. Street, N. W., Washington, their offices facing on Pennsylvania Avenue.

A New Trend in Asbestos Cement Products

Not many years ago Asbestos Shingles were purchased entirely for their fireproofing and other utilitarian qualities. Architects generally held up their hands in horror when asbestos shingles were mentioned because of the very thin and flat appearance which the shingles gave to a roof. Even the colors were obnoxious to the beauty lover—the reds were too startling a red, the grey colorless, and even the slate color toneless. Now we have soft browns and reds and greens, made with thick butts, laid hit or miss as to color with result most pleasing to the eye, even to a particularly artistic eye.

Some manufacturers have gone a step farther in getting away from the thin appearance, and now make asbestos shingles in curved shape, giving Spanish tile effect.

The same lack of beauty made the use of the flat asbestos cement sheets impossible anywhere except where its fireproofing qualities outweighed all consideration of appearance or where attractive appearance was not necessary.

Now, go into a large hotel, a bank, or some other public building in which the interior decoration shows an unobtrusive elegance and beauty, and you may instantly admire the wonderful wood finish of the walls and ceiling, while at the same time you wonder how wood was

chosen against all laws of fire protection.

The answer is simply that what you see is not wood at all, but really an asbestos cement board, permanently and absolutely fireproof, but finished in such manner that the marvelous wood effect is given.

Or you may see in another building of this type, what looks to be marble of the finest quality, or a rough finish material shading in various soft greens, greys, tans, with flecks of gold,—an antique marble of priceless value you decide. Not marble at all, none of it, but again the rather prosaic asbestos cement board, in itself a material purely utilitarian but to which by a special treatment such marvelous beauty has been added that the manufacturer of the board itself would never recognize it.

The French have another asbestos cement product, this simulating carved wood, in most beautiful designs, and while this material is not used in the United States at present, and can be seen here only in sample form, there is no doubt of the immense popularity it would instantly command, if introduced on the market. It is one of the most beautiful of finishes for wall and ceiling decoration and the base of it is the absolutely fireproof, durable material—asbestos cement. This material was more fully described in the July issue.

The Asbestos Cement product therefore can no longer be regarded as a utilitarian product only—it needs only the right sort of treatment to add beauty to the utility, and the rapid strides which have been made in this direction within the last year or two are indicative of a time when the fireproof feature, while not entirely disregarded, will be merely the background for a product really purchased because of its artistic and beautiful appearance.

Stones and sticks are thrown only at fruit bearing trees.—Saadi.

Asbestos and Asbestos Paints*

By H. Cornell

Translated from the German "Farbe and Lack, Centralblatt", by Albert P. Sachs, Technical Director, Universal Press Syndicate

As the title indicates, part of the article is devoted to asbestos itself. This includes some references to the ancient knowledge of asbestos, some very general data on the properties and uses of asbestos, indications as to how asbestos is ordinarily prepared for use. some analyses of asbestos are given. The material included in this portion of the article is of too general a nature for our readers and hence has been omitted.)

Fire Resistance. In actual practice the resistance to fire of a material in case of extensive combustion by no means suffices to prevent damage to an object which has been treated with it. This holds true particularly for asbestos paints which are commonly said to be fireproof or flame-proof paints.. Without any doubt they are by themselves absolutely incombustible and their use is by no means to be considered as valueless or quite useless, but their effectiveness must not be over-estimated. Wood objects coated with such a paint are certainly protected against easy ignition in case a small fire occurs, but their effectiveness ends if the fire continues and develops into extensive burning. The heat produced in the latter case is sufficiently great to cause the protective paint (or protective cement) to begin to glow, and naturally as a result the wood underneath the protective coat of paint becomes hot, carbonizes, swells, produces cracking and flaking of the coat. The wood at this high temperature produces combustible gases which ignite as they escape and cause the temperature to increase still further and finally it becomes only a question of time before common, ordinary ignition of the wood occurs.

The proofing action of asbestos paints (and of all other materials classed as producing a fireproofing effect) is additionally limited by the fact that it is im-

*An abstract of this article appeared on page 34 of July "ASBESTOS" but we have received so many requests for the original article that we have decided to publish it.

possible to treat every object in a dwelling with them. The limited decorative value of asbestos paints prohibits their use for doors, floors and furniture; they are used chiefly for the roof and for the storage room. It is true that these are subjected to the greatest fire risk. But if a fire occurs in a dwelling, a real conflagration, the flames find sufficient combustible objects to carry along with them in the general destruction even the objects which have thus been fireproofed. What can justly be expected of an asbestos paint may be summarized as follows. Protection against easy ignition in the case of a fire of moderate intensity.

The Paints. For use as a paint the asbestos must be ground as fine as possible and then thoroly screened. The best vehicle is waterglass because it is of inorganic nature and very resistant to heat. It is, as always, used diluted; for each gallon of waterglass (so-called painter's waterglass) 2½ to 3 gallons of soft water are used; the asbestos is stirred up with this solution and then diluted to the proper consistency of the brush. The protective effect is the stronger, the thicker the coat is applied; two coats are always to be recommended. In the case of unfinished (rough) wood, care should be taken that the unevennesses of the wood are reached so that a coherent surface layer is formed. If the paint is to have any color except natural asbestos color (chiefly light gray to greenish or yellowish gray) white or colored pigments can be added at will in quantity up to 25% of that of the asbestos powder, but these pigments must be fast to alkali as otherwise they will be affected by the waterglass. Finely ground heavy spar can be used for white, ocher and umber for yellow and brown, English red (free from gypsum) for red, the ultramarine colors for blue and green and Frankfort black for gray.

There is a material called Asbestin used for fireproof paints which is a paste of asbestos, powdered clay, caustic soda and waterglass to which sand is added before use.

For practical purposes the mixture of the necessary components—asbestos powder, up to 10-15% of heavy spar and waterglass—in the dry form is to be preferred to the paste. The user then needs to add only the requisite

amount of water as is the case with the ordinary cold water paints.

Recipes. For the sake of completeness the following formulae are offered:

Formula 1: Fireproof flat paint; 15 parts of the finest ground asbestos, incorporated with 10 parts of ground clay, stirred up thoroly with a solution of 5 parts of borax and of waterglass dissolved in 15 parts of water, and the mixture applied warm.

Formula 2: Fireproof paint put out by the United Chemical Works, Inc., at Leopoldshall. This consists of extremely finely ground asbestos, magnesia and sand, incorporated in magnesium chloride solution. Strong magnesium chloride solution permits the grinding of asbestos so fine that an emulsion prepared in this manner containing 0.512 to 0.640 ounces of asbestos per gallon of strong magnesium chloride solution can be pressed thru the finest hair screen without leaving any residue. The slimy paste produced in this manner when thoroly incorporated with an intimate mixture of one part of burned magnesia and two parts of finely ground sand, yields a paint which 24 hours after application renders wood remarkably fire resistant. Magnesium chloride solutions of 20-30% strength are used for preparing the asbestos emulsion (German Patent No. 206,626).

Formula 3: Wood is boiled for 2-3 hours in a strong solution of potassium sulfate; after drying it is dipped into a heated mixture of coal tar and clay; it is then dusted with a mixture of asbestos and kaolin. The adhering layer is smoothed down and the object is heated in a steam chest which causes the fireproof coating to unite firmly with the wood.

Formula 4: A fireproof paint mass is prepared according to German patent 58841 by adding to three parts of boiling water four parts of a powder obtained by mixing 45 parts of hydrated magnesium silicate, 5½ parts each of dextrin and gypsum, 2 parts each of calcium carbonate and alum and 1 part of common salt.

Formula 5: According to British patent 3353 of 1912

a fire-resistant paint is obtained by mixing a solution of quartz, potash, chalk and litharge in alkali with asbestos powder.

Formula 6: According to German patent 247372 fireproof paints are prepared by mixing 100 pounds of lead linoleate and 250 pounds of turpentine with 100 pounds of (for example) white lead, 75 pounds of powdered basic ammonium magnesium phosphate obtained by treating a solution of 40 pounds of ammonium phosphate in 4.75 gallons of water and 7.25 gallons of 22° ammonia liquor with 90 pounds of magnesium sulfate in 4.75 gallons of boiling water. The basic double salt is filtered and dried in air at 112° F. Wood painted with this material does not ignite when held in a bunsen-burner flame for two minutes, but merely carbonizes, and even after this time the flame remains local and spreads only very slowly so long as the coating is not damaged. This paint is, therefore, especially suitable for dynamos and boilers. (German patent No. 247372).

In reply to the question as to which objects enter into consideration for painting with flameproof asbestos paints we may name wooden barracks, wooden shops, storage buildings, sheds, wood trim on entrances and similar structures consisting of wood principally. Here their use is satisfactory because their appearance meets the requirements and because their fire protective action can best be utilized in such cases. It is quite common for structures in the vicinity of large industrial plants or near railway stations to be set on fire by glowing coals or sparks from locomotives, blast furnaces, etc. This could be prevented by a good, intact coat of asbestos-waterglass paint, especially as waterglass plaints stand up very well, particularly on raw wood even when exposed to the elements.

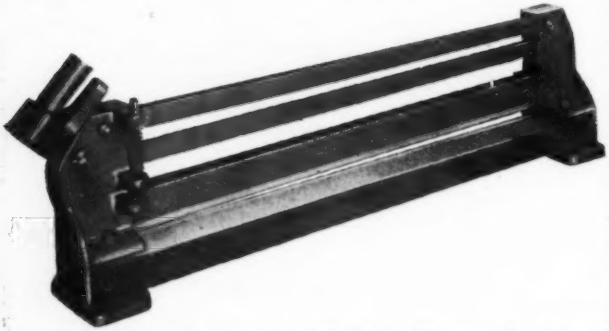
Asbestos is used not only as a water paint in combination with waterglass, but also as an oil, paint or lacquer. Paints of this kind are sometimes required in factories, especially in machine rooms, as it has been observed that ordinary oil paints or lacquers on the pedestals or even on metal doors ignite in case of a fire and thereby assist in

spreading the conflagration.

In the case of a white lead paint, the white which has been ground in oil is thinned out with linseed oil varnish and asbestos powder ground down on a paint mill with half varnish and half turpentine is added to the extent of 30%, and then the whole is thinned out with turpentine substitute until it is ready for the brush. The coat has a very dull appearance. If a lustrous finish is desired a good enamel of the desired color is taken, 30% of asbestos added, ground down thick to a semi-varnish and then thinned out as required with turpentine substitute. Naturally any color can be selected.

A New Asbestos Shingle Cutter

A new cutter for Asbestos Shingles, the chief characteristics of which are its light weight, compactness and strength, has been invented and patented by the Henesey Manufacturing Company, 195 Shotwell Park, Syracuse, N. Y.



The Henesey cutter weighs but 38 pounds, is nine inches high, and cuts 21 inches. It punches the shingles as well as cuts them, and can also be used for cutting asphalt shingles. The working parts are housed. The punch is operated by handles. The blades open up ⅜ in. and it will cut and punch Asbestos Shingles ¼ inch in thickness or less.

FACT AND FANCY

Comparison of Real Wages.

A most interesting tabulation has been compiled by the National Industrial Conference Board of New York City, comparing real wages in foreign countries with those in the United States.

The figures are based on food prices and cost of shelter in the various cities and the comparison is made with Philadelphia on a basis of 100.

	Jan. 1926	Oct. 1925	July 1925	Jan. 1925
Philadelphia, U. S. A.	100	100	100	100
Ottawa, Canada	83	88	81	69
Sidney, Australia	77	76	77	70
Copenhagen, Denmark	72	64	53	41
Oslo, Norway	58	52	45	38
London, England	56	53	55	45
Amsterdam, Holland	49	46	46	37
Stockholm, Sweden	49	46	40	36
Paris, France	..	..	..	33
Berlin, Germany	40	35	34	29
Brussells, Belgium	33	31	32	28
Prague, Czechoslovakia	33	31	28	29
Lodz, Poland	29	33	33	27
Rome, Italy	..	..	27	23
Vienna, Austria	29	28	26	23
Milan, Italy	28	26	27	21
Warsaw, Poland	26	28	28	23

These figures may explain to some extent why foreign countries can, in spite of high tariffs and long freight hauls, often undersell United States manufacturers.

Research in Mining and Metallurgy.

The Carnegie Institute of Technology announces an unusually extensive program of studies in mining and metallurgy during the coming year. The work, as in the past will be carried on by the Department of Mining and Metallurgical Engineering, in co-operation with the Pittsburg Station of the U. S. Bureau of Mines, and under the direction of two advisory boards of engineers and business men representing the mining and metallurgical industries.

Thirteen Research Fellows have been appointed for this work, five to study problems in metallurgy and eight assigned to research in problems relating to coal mine engineering. Nine Senior investigators to assist the Research Fellows will be furnished by the Bureau of Mines, and of these P. Nichols, who will be remembered by many of our readers, will assist in the investigation of the problem "Coal Ash Fusibility as related to Clinkering."

Motion Pictures in Industry.

Industry is finding the motion picture an answer to many of her problems, and motion pictures showing manufacturing or other industrial processes are becoming more and more popular.

Industry, in fact, finds that she can use the motion picture for promotion, instruction and selling, and at the same time the picture can be made so entertaining and interesting that it will hold the attention of all ages and classes.

There has recently been established the Stanley Advertising Company (an amalgamation of Motion Picture Consultants, Inc., of New York and the Stanley Advertising Company of Philadelphia.) This corporation will devote its efforts exclusively to the promotion of the industrial film idea. The staff of experts in this huge industrial film organization includes advertising and merchandising men who work out complete plans for campaigns to tie up with the showing of the pictures; scenarists of the exceptional type that can combine convincing selling points with entertaining plots and stories; directors and cameramen who know how to draw from behind factory doors the engaging romances that lie hidden there, putting human interest into inanimate things as well as the living; and circulation managers who assure the client of distribution thru the numerous existing theatrical and non-theatrical outlets.

The President of the Stanley Company of America, in discussing the plans of the new organization, says "The day is not far away when every concern will have one or two films made each year if for no other reason than to keep an historical record of their progress, just

New Finishing Mill of Cyprus Asbestos Co., Limited. *(See Opposite Page)*

as we now take pictures of our children as they grow up day by day."

It is proposed to develop in time the most comprehensive library in the world showing every single phase of industry.

Insulation Makes Better Moonshine.

The first instance of insulation being disgracefully mixed up with the prohibition law has come to our attention thru the Milwaukee Journal.

The material in question was used to cover a still and its connections which occupied a secret chamber underneath a garage in Milwaukee. The still was large enough to hold 100 gallons of mash.

The insulation was found to be very efficient for the purpose as the product made by this particular still was much stronger than ordinary moonshine.

A Rational Basis for Ventilation. The Journal of the American Society of Heating and Ventilating Engineers, will publish in its August number an article on the above subject by J. E. Rush, M. D., Department of Hygiene and Public Health, University of Kentucky, Lexington, Ky.

This article may be of interest to those of our readers contemplating the erection of new buildings. We will be glad to lend our copy of the article to anyone interested, or the article can probably be obtained direct from the Society at 29 W. 39th Street, New York City.

On the opposite page appears the New Finishing Mill of the Cyprus Asbestos Co. Limited. This mill, we are informed, has an output of 90 hundred pound bags of finished fibre per hour.

An extension of the Company's Aerial Ropeway passes thruout the length of the ground floor. The weighing and bagging of the fibre is automatic and the fibre is weighed, bagged and despatched on the ropeway within two minutes of being produced.

The system of milling employed ensures absolute uniformity of product at all times.

Cyprus Asbestos Co., Limited. (See Opposite Page)

Eliminating Fatigue*

By William R. Basset, *President of Miller, Franklin, Basset & Company, Inc.*

It has been calculated that, on the average, every workman, each day, turns out 20 cents worth of product less than he might, because of unnecessary fatigue. Multiply that by the number of workers you employ and then by the number of working days in a year and you will be astonished at the total cost to you.

Much of this fatigue can be eliminated.

In one plant as a result of a study, the working day was shortened 45 minutes, proper rest periods allowed and methods of doing work improved. The result was an increase of 35% in the daily production. Similar results have been achieved in many plants.

The common causes of unnecessary fatigue are:

1. Poor light.
2. Awkward position.
3. Noise.
4. Improper tools.
5. Too high or too low speed of working.

I have seen production of bench workers increased 22% merely by raising the height of the stools 2 inches. Unnecessary noise has been found to be very tiring.

Anyone doing an operation over and over tends to strike a rhythm of movement which, when found, greatly reduces the fatigue. Inability to find the proper rhythm, may result in greatly reduced production. For this reason a rapid pace may be less tiring than a slow one, if it meets the rhythm of the worker.

For the sake of increased profits, if for no other reason, it pays to study the methods of doing work, so that needless fatigue may be eliminated.

*The second of the series of articles on cost.

CONTRACTORS AND DISTRIBUTORS PAGE

Following Up the Speculative Builders

One of the chief forms of building activity in practically every city of any size in the country, is the erecting of rows of houses, generally by large general contracting firms. These are sold by the contracting firm to home seekers, the terms of payment generally being a down payment with the rest in building and loan first and second mortgages.

Naturally the object of building such houses is profit, and therefore the cost is cut as much as possible, particularly where such cutting does not affect the "appearance" of the house, with the result that often the pipes and boilers remain uncovered.

Now the people who buy these homes often have little knowledge of the running of a house, and must learn by experience. The first year they find it takes all their energy and most of their spare cash to meet the various charges for interest, taxes, and the like, plus those little things which must always be done by a house owner after he moves in, no matter how perfect in appointments the house may be.

By the time he has lived in the house a year, however, the interest and other payments have been worked into his budget, and he has time to look around him and see if his house is operating efficiently. He probably discusses with his friends the amount of coal which he found necessary to burn this first winter in order to keep himself and family reasonably warm, and incidentally finds out whether his cellar is cooler or warmer than that of his acquaintances.

By this time he is generally a live prospect for insulation but often doesn't realize the saving he can make nor his real need for keeping the heat in his pipes instead of letting it escape into his cellar, unless some of his friends have used insulation and inform him of its desirability.

Now is the time for the insulation contractor to step in and give the house owner some advice. If the contractor is wise he will manage to take a measurement of the pipes and boiler when the houses in that particular row are first built, and since all the houses in the row are exactly alike, one measurement and one estimate will serve for all.

When the houses have been occupied by their owners for a year the contractor's representative can begin on the owners of these houses as his prospects. It may be that he first sends a small folder, showing the savings made by the covering of pipes and boilers. Then he calls on the various residents and endeavors to sell the idea of insulation. He has an advantage because he can tell them at once what the cost of insulation

will be, and what saving can be made in coal in one winter. And when the men he visits talk it over between themselves the price for one house as well as the saving figures are applicable to all.

When the contractor gets his first job in the row, then it is up to him to keep his name and business as prominently as possible before the occupants of the other houses. The name of the contractor and his address should appear prominently, by labels, on the covering so when Jones shows Smith his cellar and the covered pipes, he can give the name of the contractor without hesitation, or the bother of looking it up. A card displayed in the front of the house, giving the name of the contractor, should be used while the work is being done.

Another piece of sales literature at this juncture is not a bad idea either, or a letter, calling attention to the fact that Mr. Jones on their street is having his pipes covered and by so doing will effect a saving in his coal during the coming and successive winters.

The fact that one estimate will serve for a number of jobs makes the sales cost very low, and the advertising helps along still further. There are rows and rows of houses being built in all parts of the country. It is easy to get in the sample house and ascertain whether the pipes and boiler are covered. One man could surely keep himself busy working on prospects like these.

BUILDING STATISTICS

The month of June shows a decided decrease in contracts awarded in the 37 eastern states, as reported by the F. W. Dodge Company. The figures are: for June 17,748 projects, containing 77,794,500 square feet of floor space, valued at $547,792,400; for May 17,243 projects, 85,024,800 square feet of floor space, valued at $549,814,800.

It will be noted that the valuation did not decrease so drastically as the floor space. This, of course, is due to the fact that the majority of contracts call for a higher class of buildings. Some of the classifications, such for instance as educational buildings, show a decrease in floor space but an increase in valuation.

AN OMISSION

In our July issue we gave the life history of Andrew Johnson, formerly President of the Johnson's Asbestos Company at Thetford. In some manner or other, however, we failed to state the year of Mr. Johnson's birth. Mr. Johnson was born on December 16th, 1850, being almost seventy-six years old when he passed away.

BRAKE LINES

This page devoted each month to the discussion of brake lining activities by O. B. Towne, Commissioner of the Asbestos Brake Lining Association

The brake testing business has made a record this summer. The campaign in Michigan put on by the Detroit Automobile Club and its branches has been the biggest ever. One hundred and twenty thousand cars were tested there in one week. This campaign took in about twenty-five cities. The Detroit organization had the co-operation of the State Police in addition to the local Police.

In the great Bear Mountain Disaster in which ten people were killed and twenty more hurt, the driver depended entirely upon his brakes—and apparently the brakes were not in good repair. When will the American people wake up to the fact that brakes must be in repair at all times if any safety is to be had?

Several Southern cities are planning for additional brake testing campaigns. Apparently they are getting ready for the fall and winter traffic.

Much interest has been aroused by an article appearing in the July Journal of the Society of Automotive Engineers regarding power brakes using a metal lining for buses and trucks. The concensus of opinion seems to be that asbestos as a brake lining for air brake equipment will not be disturbed in the least as a result of experiments now being conducted. The increase in carbon content of the brake drum recommended by the Association and being carried out very satisfactorily by the brake drum manufacturers is doing away with practically all of the complaints registered by the power brake manufacturers. The soft drum warped and scored as a result of the heat from intensive service and tore the lining to pieces. However, this is being rectified by the use of a better drum, having a higher carbon content and asbestos is holding its own, as usual.

The test for brakes established by the Bureau of Standards of the Department of Commerce is being taken up quite generally. Fifty feet for stopping at a speed of twenty miles an hour is proving satisfactory to all. This is being used by both the State and Local Police.

A number of inventions in the brake lining and clutch facing field are being hinted by the manufacturers and in a very short time it is estimated that these products will be put on the market. Just what they are is not known definitely at the present time, awaiting the granting of certain patents. Much interest is being displayed on the part of brake lining manufacturers as to what these patents will be.

AUTOMOBILE PRODUCTION

During June total production of passenger cars in the **United States** totaled 339,542, trucks 44,033, or a total of motor vehicles of 383,575. This showed quite a decrease from May, during which month total United States production was 420,978.

Do not confuse these figures with previous ones which gave total production for the United States **and Canada**; the June figures for Canadian production are not as yet available.

Total production in the United States for the first six months of 1926 amounts to 2,070,390 passenger cars and 254,387 trucks, or 2,324,777 in all. Last year total United States production for the first six months of the year amounted to 1,866,131 cars and 229,114 trucks, or 2,095,245 in all.

A BELIEVER IN INSULATION

(Being an exact copy of letter received by the contract department of one of the large insulation manufacturers)

A few weeks ago you insulated the heating pipes and boiler in my residence situated in a fashionable suburb of Baltimore, with Carey Magnesia Pipe Covering.

I am so well pleased with the insulating qualities of the Magnesia that I am going to the additional expense of having my house weather stripped in an endeavor to make it positively certain that I will not need a fire during the winter months.

PRODUCTION OF DOLOMITE

The U. S. Bureau of Mines reports that during 1925 the production of raw dolomite, reported as sold for the manufacture of refractories, amounted to 415,710 short tons, valued at $381,215.

Besides this quantity operators who both quarry and dead-burn or sinter, dolomite, reported 392,145 tons of sintered material, valued at $3,730,509.

The quantity of raw dolomite reported was 35 per cent more than in 1924 and the sintered material increased 19 per cent.

Rhodesia[1]

	April Tons (2000 lbs.)	1926 Value
Bulawayo District.		
Nil Desperandum & Sphinx (Afr. Asb. Mng. Co. Ltd.)	784	£13,703
Pangani (J. S. Hancock)	31	459
Shabanie (Rho. & Gen. Asb. Corp. Ltd.)	1,067	26,067
Shabanie Adjustment year ending 3/31/25		19,858
Lomagundi District.		
Ethel (Union & Rho. Tr. Ltd.) February, March and April	49	1,225
Victoria District.		
Gath's (R. & Gen. Asb. Corp. Ltd.)	923	23,073
King and King A (Asb. Corp. Ltd.)	404	9,427
	3,258	£93,812
For April 1925	2,206	48,683

Union of South Africa[2]

	April Tons (2000 lbs.)	1926 Value
Transvaal	1,258	£17,956
Cape	322	6,436
	1,580	£24,392
For April 1925	598	£ 8,104

China[3]

1922 (Exports)—194 tons
1923 (Exports)—126 tons

Western Australia[4]

	Tons	Value
1924	73½	£2,206
1925	50¾	1,641

1. Figures published by Rhodesia Chamber of Mines.
2. Figures published by Dept. of Mines and Industries for U. of S. Africa.
3. Report on Mining Operations in Province of Quebec during Year 1925.
4. Figures supplied by Mines Department, Perth, Western Australia.

United States[5]

	1925	
Chrysotile (Mined in Arizona and California)	93 tons (2000 lbs)	$40,750
Amphibole (Mined in Georgia, Idaho and Maryland)	1,165 tons (2000 lbs)	$10,950
	1,258 tons	$51,700

The sales of Chrysotile Asbestos showed a decrease of 46 per cent in quantity and an increase of 20 per cent in value, compared with 1924, and the sales of amphibole asbestos were more than 9 times as great in quantity and were 28 per cent greater in value.

Sesqui Notes

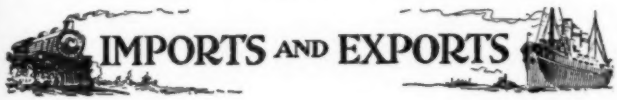
While space will not permit this month of any lengthy description of the many interesting things to be seen at the Sesqui Centennial Exposition, being held in Philadelphia, we cannot let the month go by without some comment.

Perhaps the lighting of the Exposition Grounds, together with their architectural beauties and landscaping attractiveness, deserves first mention. The giant Liberty Bell at the entrance, the colored lights in and near the buildings, and the huge search lights being constantly thrown over the buildings and grounds transform the Exposition into a fairyland.

While we have not been able to see all the exhibits, those which we have seen, are most interesting and instructive. We might mention the Los Angeles County and Denmark Exhibits as being of particular interest.

We hope many of our readers will find it possible to visit the Exposition this Fall, when cooler weather will make their visit more comfortable.

5. Figures supplied by Bureau of Mines, U. S. Dept. of Commerce.



Imports into U. S. A.

Unmanufactured Asbestos:

	May 1925 Tons (2240 lbs)	Value	May 1926 Tons (2240 lbs)	Value
Canada	13,759	$453,649	15,992	$512,568
United Kingdom	1	152	9	1,623
Br. S. Africa	...	...	165	27,742
Br. India	1	25	...	...
France	...	...	1	24
Germany	...	...	25	3,025
Port E. Africa	220	40,500	2	468
	13,981	$494,326	16,194	$545,450

The material from Canada (May 1926) according to reports of the U. S. Customs Department, consisted of 510 tons of Crude, valued at $100,647, 6,412 tons of Mill Fibre valued at $258,652, and 9,070 tons of lower grades valued at $153,269.

That from the United Kingdom consisted of 8 tons of Crude valued at $1,564 and 1 ton of Mill Fibre at $59.

The African material was all Crude and the ton from France was stucco.

Manufactured Asbestos Goods.

	May 1925 Pounds	Value	May 1926 Pounds	Value
Asbestos Yarn				
Germany	...	...	440	445
United Kingdom	...	...	61,568	19,888
Fabrics, Woven.				
Germany	...	...	904	261
United Kingdom	16,211	8,135	2,151	784
Packing, fabric.				
Canada	35	15	30	15
United Kingdom	...	...	17,665	9,364
Packing, not fabric.				
Austria	390	275	4,572	1,064
United Kingdam	207	41	...	...
Canada	52	8	42	27
	649	324		

ASBESTOS

	May 1925 Pounds	May 1925 Value	May 1926 Pounds	May 1926 Value
Shingles, Slate, Wood and Lumber.				
Belgium	1,194,907	19,081	5,675,490	80,313
Canada	114,345	2,798	80,055	2,641
France	...	...	60,000	888
Germany	66,762	2,663	258,465	5,082
Italy	46,364	577	...	...
Netherlands	477,014	9,885	100,400	1,565
	1,899,392	35,004	6,174,410	90,489
Asbestos Cement.				
Belgium	...	...	186,950	3,388
Italy	...	...	63,713	917
Other Manufactures.				
Austria	...	...	210	348
Belgium	...	...	1,930,763	26,575
Germany	1,800	337	9,953	253
United Kingdom	4,127	1,234	17,598	6,672
			1,958,524	$33,848
Grand Total	*1,922,214*	*$45,099*	*8,470,969*	*$160,490*

Exports from U. S. A.

Exports of unmanufactured asbestos for the month of May 1926 amounted to 6 tons, valued at $1,128; compared with May 1925 when 31 tons valued at $3,981, were exported.

Exports of manufactured asbestos goods:

	May 1925 Pounds	May 1925 Value	May 1926 Pounds	May 1926 Value
Paper, Mlbd. & Rlbd.	111,040	$6,248	101,799	11,615
Pipe Covg. & Cement	197,592	12,442	441,739	34,334
Textiles, Yarn & Pkg.	114,628	63,443	134,874	70,111
Brake & Clutch Lining	119,160	82,149	145,675	93,519
Magnesia & Mfrs. of	291,557	14,922	1,108,514	41,409
Roofing (Asbestos)	7,385 sqs.	60,778	3,958 sqs.	36,690
Other Manufactures	220,262	37,373	284,754	35,707

Imports and Exports by England.

Imports of Raw Material:

	April 1925 Tons (2240 lbs)	April 1925 Value	April 1926 Tons (2240 lbs)	April 1926 Value
From Rhodesia	1,378	£34,034	1,155	£43,652
From Canada	611	8,899	229	5,087
From Other Countries	326	8,037	993	21,739
Total	2,315	50,970	2,377	70,478
Re-Exports	756	21,165	250	8,056

ASBESTOS

Exports of Asbestos Manufactures:

	April 1925 Tons (2240 lbs)	Value	April 1926 Tons (2240 lbs)	Value
To Netherlands	24	£ 3,031	37	£ 3,913
To France	37	6,778	52	12,327
To U. S. A.	6	1,758	20	3,381
To British India	728	13,849	799	14,713
To Australia	29	6,093	40	6,620
To Other Countries ...	931	50,135	1,522	58,093
Total	1,755	81,644	2 470	99,047

Imports of Raw Material.

	May 1925 Tons (2240 lbs)	Value	May 1926 Tons (2240 lbs)	Value
From Rhodesia	266	£ 6,797	231	£ 5,950
From Canada	367	6,906	497	9,445
From Other Countries .	211	4,236	569	14,768
Total	844	17,939	1,297	30,163
Re-Exports	191	4,694	168	5,395

Exports of Asbestos Manufactures:

To Netherlands	41	£ 4,639	41	£ 3,446
To France	46	16,582	18	5,390
To U. S. A.	8	2,434	56	8,788
To British India	463	13,029	833	15,933
To Australia	29	6,897	31	4,208
To Other Countries ...	1,463	63,345	1,067	47,613
	2,050	106,926	2,046	85,378

Exports of Raw Asbestos from Canada.

	April 1925 Tons (2000 lbs)	Value	April 1926 Tons (2000 lbs)	Value
United Kingdom	356	$ 30,222	221	$ 22,283
United States	5,582	314,112	6,212	395,843
Australia	60	4,200	...	...
Belgium	550	38,750	603	42,130
France	160	8,600	590	40,050
Germany	577	45,272	577	60,786
Italy	108	4,530	380	29,850
Japan	350	16,372	50	2,500
Netherlands	75	13,250	270	21,750
Total	7,818	475,308	8,903	615,192

ASBESTOS

	April 1925 Tons (2000 lbs)	Value	April 1926 Tons (2000 lbs)	Value
Sand and Waste—				
United Kingdom	74	1,283	30	450
United States	7,357	102,973	8,811	128,558
Belgium	55	1,100	...	...
France	10	150	6	90
Germany	271	4,740	60	1,050
Italy	...	...	30	600
Netherlands	100	2,000	...	...
Total	7,867	112,246	8,937	130,748
Grand Total	*15,685*	*$587,554*	*17,840*	*$745,940*

Last month we mentioned (on page 40) Indian Asbestos which had been treated at Newark, N. J.

It is disappointing to find, however, after careful examination by several people in the Industry who should know, that these fibres are too short and too weak for use other than a filler for Asbestos Cement. They are undoubtedly of the Amphibole variety.

MARKET CONDITIONS

Business in General.

As a whole, business in the United States is regarded as satisfactory, and in many lines it is believed that 1926 will be a record breaker in volume.

The Bond Market is high, the stock market is recovering fairly rapidly without an orgy of stock gambling; the political situation may be more interesting this fall but there is nothing alarming in it. Reported and promised crops are good. In fact most of the basic conditions are favorable to good business during the last half of the year.

Asbestos—Raw Material.

In Asbestos demand for the longer fibres, including shingle stocks, is very good. Demand for shorter grades has slackened and stocks of those grades are piling up at the mines. This is most likely the result of many manufacturers anticipating their requirements last year on account of the merger. This condition, in face of demand for the manufactured products made from these shorter grades, should change very shortly as stock in warehouses will soon be depleted to an extent which makes ordering necessary.

All the Canadian mines are working full force and as the rock in Canadian mines is running in most cases richer than ever before, Canada is really showing the greatest production ever taken from her asbestos mines.

Blue Asbestos is very active at present. Demand really exceeds supply. Amosite is slowly but surely coming into its own.

Little change has been noted in prices.

Mr. E. J. Wilson of New York City, in commenting on the market situation says:

"Last spring the pessimists were predicting a business slump in America. The predicted reaction did not come in the spring; the midsummer decline is not noticeable, and now all signs point to a heavy volume of business in the fall. It is now admitted that current business conditions

are excellent and that any danger of overproduction, so often fatal to prosperity, has been guarded against by the conservative temper of the business community. The month of July is reported by trade organs as the 'most remarkable, commercially, ever experienced by the industry.' The motor car industry is in fine condition with large sales. In fact there has been no check to prosperity.

"No doubt the pessimists and there are many of them in the Asbestos industry, will now say 'Wait until 1928; business is always bad in a presidential year.'

"The asbestos industry has shared in the general prosperity, both mines and manufacturers. The month of July was a good one for the mines generally; production and sales were large. The spinners were very active and most of them realize that there can not be any overproduction of good spinning material. Prices will be maintained and very possibly increased in the near future so far as spinning material is concerned."

Asbestos—Manufactured Products.

In the manufactured market there is little change. Demand appears to be fair in all lines. The next few months will see heavier demand in the paper and insulation lines, probably higher than for some time.

Automobile sales are picking up after the usual July slump and prospects are for high sales in the automotive lines this fall—which, of course, reflects favorably on the asbestos textile trade.

Activity in the asbestos shingle line is unabated.

The Asbestos Brake Lining Association, in commenting on the market situation in the brake lining industry says:

"Business is seasonal and normal with a tendency toward improvement. Orders for 1927 car equipment are keeping pace with the normal increase in car production of 1927 models now in process."

Altogether we can take our annual vacation trips with the comfortable feeling in the back of our minds that we will need the rest and recreation to fit us for a busy fall.

NEWS OF THE INDUSTRY

Birthdays. Our birthday list this month is quite a lengthy one. H. S. Mikesell, President of the Superbestos Company, Chicago, will celebrate his birthday on August 16th; Harold W. Davis, Manager Insulation Department of the American Insulation Company, Philadelphia, on August 25th; J. Gillmur Tyson, President, American Asbestos Company, Norristown, on August 25th; Harrison S. Sweet, Manager Oneida Plant of the Mohawk Asbestos Slate Company on August 28th; F. F. Turner, President, Turner Asbestos and Roofing Company, Philadelphia, on August 31st; C. M. Clarke, President, Sall Mountain Company, Chicago, on September 3rd; and B. Marcuse, President Asbestos Crude & Fibre Corporation, New York City, on September 11th. Our heartiest congratulations are extended to these gentlemen.

Franklin Manufacturing Company. The properties at Franklin and Stoneboro, Pa., have, according to recent news notices, been sold by the bondholders to the Chicago Pneumatic Tool Company of Chicago, Ill.

Atlas Asbestos Company of North Wales is erecting an additional building to care for the continued expansion of their brake lining business.

"Osotite", the liquid packing compound mentioned on page 37 of the July issue, is manufactured by Stewart, Brown & Company, 70 Victoria Street, S. W. 1, England.

The Asbestos Shingle, Slate & Sheathing Company. Mention was made in the July issue of the new factory to be erected in the west by the Asbestos Shingle, Slate & Sheathing Company of Ambler, but the item failed to state that the site of the factory would be St. Louis.

Hall & Nielson, Ltd., of Bury, Lancashire, England, have, during the past year, established agencies for their Bramec Friction Linings in Australia, India, Norway, Denmark, Sweden and Finland, France, Spain and East Africa, and report that the business from these countries has been exceptionally good.

James Gow, of Cape Asbestos Company Limited of London, recently called at the office of "ASBESTOS". Mr. Gow will be in the States until about the end of September, and can be reached by mail at the Waldorf-Astoria, New York City.

Mr. Gow is in the States in the interest of Amosite, an asbestos fibre which undoubtedly has a big future before it. Readers interested in the use of asbestos crudes and fibres should not miss this opportunity to meet Mr. Gow and have him explain the advantages of Amosite.

Bechuanaland Asbestos Mines Limited, is the name of a new

company being formed in Johannesburg at the present time with a capital of £5,000 in £1 shares, to acquire the right and option to purchase three base metal leases of 2,000 acres in the Gathose Native Reserve British Bechuanaland, on which a deposit of Asbestos has been located. It is reported that the fibre is of very fine quality and resembles Cape Blue Asbestos. Development already completed indicates that there are approximately 300 tons of fibre in sight.

Pietersberg Blue Asbestos. The mining of blue asbestos in the Pietersburg area has recently received an impetus from the prevailing demand for this product. The first shipment of 10 tons, from this district has been recently made. So far the quality of the fibre is reported to be rather poor but shows an improving tendency, and in any case under existing conditions is of considerable industrial value.

Asbestos Cloth. At the Foundry Trades Exhibition at the Agricultural Hall, Islington, England, held during July, Asbestos Cloth was exhibited in an effective manner. A man dressed in a full asbestos suit displayed the cloth to great advantage.

Turner & Newall Limited recently announced an interim dividend of 6d. per share, less tax, on the ordinary shares of their company.

Durwyllan Company of Paterson, N. J., last fall purchased several acres of ground at 37 Kentucky avenue, on which they erected a modern daylight factory of brick construction with slow burning roof. Their former factory was located at East 5th and Rye Streets, Paterson, and removal therefrom is in process at present, altho it will be well into the fall before production will be at a fair schedule.

The new plant is being equipped with the most modern weaving equipment, developed by the mechanical genius of the organization.

When the new plant is in full operation it expects to be able to produce heavy webbings and asbestos brake lining at a rate never before experienced.

The office of Durwyllan Company is also located at 37 Kentucky avenue.

Charterland & General Exploration & Finance Company Limited, are installing additional plant and power at their Shabanie Mine, this considerably increasing the output.

The sales of this company have almost doubled in the last three years.

At the annual meeting held on July 9th, the chairman stated that since the registration of the Company on July 12th, 1917, it had paid 131¼% in dividends and had distributed £245,000 fully paid shares as bonuses which on the 30th of June, 1926, had a market value of £704,375.

The Cape Asbestos Company participated in the interesting Exhibition held by the British Chemical Plant Manufacturers'

Association at Central Hall, Westminister, London, from July 19th to July 24th inclusive. It was the only firm of Asbestos manufacturers represented, which fact speaks well for the enterprise of this company in endeavoring to secure a foothold for its product in the Chemical Industry.

Asbestos Covering & Textile Company of Boston, Mass., will on September 1st, move into their new location at 91 Broad Street. They were formerly located at 294-96 Franklin Street, at the corner of Broad.

At the new location they have leased the entire building, giving them approximately three times the floor space as at their old address.

The Canadian Newspapers are again giving space to the Asbestos Industry. Witness the article appearing in the July 23rd issue of the Financial Post (published at Toronto); also an article in the same paper on July 30th.

National Asbestos Company. A small fire occurred in the plant of the National Asbestos Company, Jersey City, N. J., due to overheated oil burners, on July 28th. The damage however, was very slight.

Bell Asbestos Mines. In response to frequent inquiries and current gossip, the Bell Asbestos Mines announces that it has no intention of increasing its output thru the installation of an additional unit at its Thetford Mines.

American Insulation Company. In our July number it was reported that the American Insulation Company was contemplating the erection of a shingle factory at St. Louis. Since then we have been advised that this factory will be erected by Eternit Inc., and not by the American Insulation Company.

PATENTS

Brake or Clutch Band Lining. On June 29th, granted to George K. Gillette, Pembroke, Mass., Re-issue No. 16,369, Serial No. 105,036 filed April 27, 1926. (Original No. 1,496,028, dated April 29, 1924, Serial No. 573,021, filed July 5, 1922.) Described as a brake or clutch lining the inner layer being composed of herring bone woven textile fabric, presenting angular surface ridges extending across said layer and obliquely in opposite directions from the longitudinal center to the edges thereof, said ridges forming oil conducting channels.

Refractory and Heat Insulating Cement. No. 1,591,676. Granted on July 6th to Hugo Gallinowsky, Richmond Heights, Mo., assignor to the General Insulating & Mfg. Company of Alexandria, Ind. Filed October 3rd, 1924. Serial No. 745,524.

Described as a refractory and heat insulating cement comprising a mixture of powdered calcined siliceous limestone (mineral wool rock) and mineral wool.

Suction Cylinder or Roll Machines for making Paper, Paper-

board, Millboard and the like. No. 1,591,921. Granted on July 6th, to Roland Blyth Heys, Bristol, England, assignor to St. Anne's Board Mill Company Limited, Bristol, Eng. Filed August 20, 1925. Serial No. 51,306, and in England, March 25, 1925.

(This does not refer particularly to asbestos paper but may be of interest to the manufacturers of that article.)

Speaking of Golf

Dear Editor:

From time to time you have asked your readers for little stories about golf. Here is one that ought to interest quite a few of your subscribers because the principals involved are well known thruout the trade.

By way of preliminary it should be stated that A. M. Ehret, President of the Ehret Magnesia Mfg. Company is a member of the Bala Golf Club, among others, and is given by that Club the very interesting and liberal handicap of 10.

Possibly it is because of Mr. Ehret's generosity in giving a handsome silver trophy for one of the important annual tournaments at Bala that he enjoys this very liberal handicap. However that may be, on Monday, July 19th, Mr. Ehret and Walter Supplee, Manager of the Ehret Branch in Philadelphia, inveigled the writer into a journey to Newark, N. J., where we three were the guests of Chas. S. Wood, who represents the Ehret Company in the Metropolitan district. After much discussion en route to the Forest Hill Club, Ehret and Supplee agreed to play Wood and myself, provided we would start them 6 points up in a 2 point match.

I do not know whether Ehret was full of Magnesia or Asbestos, but he went off on the wildest jamboree I have ever seen and the net result was that Wood and I found ourselves 19 points down. Ehret scored a course, parred at 70, of 75 gross, and in this he had 5 penalty strokes having put five balls out of bounds. Eliminating the penalty strokes, he completed the course in even par—yet he enjoys a handicap of 10.

I have been struggling on and off with this game of golf for many years but have yet to come anywhere near scoring par on any course—and they give me a handicap of 6!

You are at liberty to publish all or any part of this letter with the single condition that you send a marked copy of the issue of "ASBESTOS" in which you mention this match, to the Handicap Committee, Bala Golf Club, Cynwyd, Pa.

All joking aside, my hat is very fully doffed to any man who can play the kind of golf Mr. Ehret showed us at Forest Hill, and it sure was a joy to watch it.

Yours very truly,

C. J. STOVER.

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